

**CONSTRUCTION PLANS**

**FOR**

**THORNTON AVENUE DRAINAGE IMPROVEMENTS**

**PHASE III**

**FOR THE**

**CITY OF HUNTSVILLE  
HUNTSVILLE, ALABAMA**

**(PROJECT NO. 65-12-DM18)**

**MAYOR  
HONORABLE TOMMY BATTLE**

**CITY ENGINEER  
SHANE DAVIS P.E.**

**CITY COUNCIL MEMBERS**

**RICHARD SHOWERS, SR (PRES. PRO TEMP) DISTRICT 1**

**MARK RUSSELL (PRESIDENT) DISTRICT 2**

**JOHN OLSHEFSKI DISTRICT 3**

**BILL KLING, JR. DISTRICT 4**

**WILL CULVER DISTRICT 5**

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**MARCH, 2012**

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## GENERAL NOTES

1. BEFORE SUBMITTING A PROPOSAL, BIDDERS SHALL EXAMINE CAREFULLY THE SITE OF THE PROPOSED WORK, THE GENERAL AND LOCAL CONDITIONS, THE PROPOSAL FORM, STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS, AND THE BID FORM, AND IT IS MUTUALLY AGREED THAT THE SUBMISSION OF A PROPOSAL SHALL BE PRIMA FACIE EVIDENCE THAT THE BIDDER HAS MADE SUCH EXAMINATION AND HAS JUDGED FOR AND SATISFIED HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN PERFORMING THE WORK, AND TO THE REQUIREMENTS OF PLANS, STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS, CONTRACT AND BONDS. NO ADJUSTMENTS OR COMPENSATION WILL BE ALLOWED FOR LOSSES CAUSED BY FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. SITE TOPOGRAPHY MAPS AND OTHER TOPOGRAPHIC DATA SHOWN ON THESE PLANS OR INCLUDED IN THE SPECIFICATIONS ARE FOR THE INFORMATION OF THE CONTRACTOR. THE CONTRACTOR SHALL MAKE SUCH ADDITIONAL INVESTIGATIONS AS REQUIRED TO ACQUAINT THEMSELVES ADEQUATELY WITH THE SITE TOPOGRAPHY FOR PREPARATION OF THEIR BID AND FOR THE SUCCESSFUL EXECUTION OF THE WORK.
3. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HUNTSVILLE "ENGINEERING STANDARDS OF CONSTRUCTION FOR PUBLIC IMPROVEMENTS", LATEST EDITION, THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS CONTRACT PROJECTS", LATEST EDITION, THE CITY OF HUNTSVILLE "DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS", LATEST EDITION, AND HUNTSVILLE STORMWATER MANAGEMENT MANUAL, LATEST EDITION, ALL AMENDMENTS TO THESE DOCUMENTS, ALL COUNTY, STATE, AND FEDERAL CONSTRUCTION GUIDELINES PERTAINING TO THIS PROJECT, OR AS DIRECTED BY THE ENGINEER OR AS REVISED PER PLAN. THE CONTRACTOR SHALL KEEP A COPY OF ALL CITY OF HUNTSVILLE ENGINEERING AND SANITARY SEWER STANDARDS.
4. NOTICE TO CONTRACTOR: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE BY HIM OR HIS SUBCONTRACTOR'S. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VIDEO TAPE THE SITE PRIOR TO CONSTRUCTION COMMENCING. IT WILL ALSO BE HIS RESPONSIBILITY TO PROVE ANY DAMAGE WAS DONE BY OTHERS. THE OWNER MAY DIRECT THE CONTRACTOR TO PERFORM NECESSARY GRADING AND DRAINAGE TO PREVENT SURFACE RUN-OFF FROM DAMAGING THE WORK. SUCH GRADING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
5. NOTICE TO CONTRACTOR: ALL EVIDENT EXISTING UTILITIES ARE SHOWN; HOWEVER IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING UTILITIES BEFORE INITIATING ANY CONSTRUCTION OPERATIONS. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS AND WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. ANY EXISTING UTILITIES INCLUDING WATER, GAS, ELECTRIC, TELEPHONE, CABLE TV, AND OTHER COMMUNICATION LINES THAT REQUIRE ADJUSTING, REPLACING, OR RELOCATING WILL BE DONE BY THE UTILITY COMPANY WITHOUT COST TO THE CONTRACTOR. ANY LINES DAMAGED DUE TO CONTRACTOR NEGLIGENCE WILL BE REPLACED AT CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CALL ALABAMA LINE LOCATION CENTER, INC., 1-800-292-8525 AND HUNTSVILLE UTILITIES, 1-256-882-8255 TWO (2) DAYS BEFORE ANY EXCAVATION ON THIS PROJECT. THIS IS A REQUIREMENT OF ALABAMA ACT 94-487.
6. EARTH FILL, INCLUDING TRENCHES, SHALL BE PLACED IN UNIFORM LAYERS OR LIFTS NOT EXCEEDING 6" COMPACTED THICKNESS.
7. ALL FILL MATERIALS OUTSIDE PAVED AREAS SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY, PLUS OR MINUS 2% OF OPTIMUM MOISTURE, ASTM-D6798.
8. IT SHALL BE THE CONTRACTOR'S OBLIGATION TO ENSURE THAT ALL TRENCHING AND EXCAVATION COMPLIES WITH THE "DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATION (29 CFR PART 1926) OCCUPATIONAL SAFETY AND HEALTH STANDARDS - EXCAVATIONS," LATEST EDITION.
9. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING INFRASTRUCTURE THAT IS CREATED DURING INSTALLATION OF CURB AND GUTTER, SIDEWALK, STORM SEWER, SANITARY SEWER AND AS A RESULT OF HIS CONSTRUCTION OPERATIONS. EXISTING PAVEMENT SHALL BE SAWCUT AT ALL CONNECTIONS TO NEW PAVEMENT. SAW CUTTING OF EXISTING PAVEMENT SHALL BE SUBSIDIARY TO OTHER ITEMS.
10. ALL BOULDERS, DEBRIS, EXCESS CONSTRUCTION MATERIALS, MATERIAL GENERATED FROM DEMOLITION OF EXISTING STRUCTURES AND FACILITIES OR TRASH SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL LAWS AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE WORK ZONE TRAFFIC CONTROL AND PROTECTION IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," LATEST EDITION.
12. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE VEHICULAR INGRESS/EGRESS TO ALL PROPERTIES DURING CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER.
13. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
14. THE DUTY OF THE CITY ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
15. ALL CONCRETE SHALL BE AIR ENTRAINED 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, CLASS "A", UNLESS OTHERWISE NOTED.
16. ALL REINFORCING STEEL SHALL BE GRADE 60 DEFORMED AND SHALL CONFORM TO ASTM A615, FOR BILLET STEEL.
17. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, SMOOTH FABRIC WITH A ASTM YIELD STRENGTH OF 65,000 PSI.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING EXISTING ROADWAYS FREE OF MUD AND DEBRIS AT ALL TIMES.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH NPDES STORM WATER REGULATIONS.
20. LANDSCAPING:
  - TOPSOIL 4" MINIMUM SELECT TOPSOIL PREPARED AS SEED BED
  - SEEDING 120 LBS/ACRE SEASONAL GRASS
  - FERTILIZER COMMERCIAL 13/13/13 AT 500 LBS/ACRE
  - MULCH STRAW, WET THOROUGHLY AFTER PLACING
21. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III UNLESS DICTATED BY DEPTH OF CONSTRUCTION. ALL PIPE WILL BE PAID FOR COMPLETE, IN PLACE, INCLUDING EXCAVATION, BEDDING, AS A SUBSIDIARY ITEM TO THE PIPE.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FOR CONSTRUCTION. IF AN AREA MORE THAN AN ACRE IS DISTURBED AT ANY ONE TIME THE CONTRACTOR WILL BE RESPONSIBLE FOR ADEM PERMITS.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONCRETE TESTING ACCORDING TO THE CITY OF HUNTSVILLE SPECIFICATIONS.
24. FOR WORK WHICH NO PAY ITEM IS LISTED, THE COST OF SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE LISTED ITEMS.
25. THE REMOVAL OF INLETS, CULVERTS, WINGS, HEADWALLS, ABANDONED UTILITIES, JUNCTION BOXES AND ANY MISCELLANEOUS ITEMS NOT SPECIFICALLY SHOWN AS A PAY ITEM SHALL BE A SUBSIDIARY OBLIGATION OF ITEM CLEARING AND GRUBBING.
26. ALL STORM DRAINS WITHIN 5 FEET OF THE BACK OF CURB SHALL BE BACKFILLED USING THE SAME PROCEDURES AND METHOD AS ROADWAY PIPE.
27. THE CONTRACTOR SHALL PROVIDE A MIN. 2.0' WIDE STRIP OF SOLID SOD AROUND THE PERIMETER OF ALL PIPE END TREATMENTS.
28. THE CONTRACTOR SHALL SEED AND MULCH OR SOD DISTURBED AREAS WITHIN 14 DAYS OF DISTURBANCE AND MAINTAIN THOSE AREAS UNTIL ALL WORK IS COMPLETE.
29. DEWATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
30. ALL TRAFFIC CONTROL MUST FOLLOW THE LATEST EDITION OF MUTCD. ANY DEVIATION FROM MUTCD MUST BE SUBMITTED TO THE CITY ENGINEER FOR PRIOR APPROVAL.
31. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM THE ADJOINING STREETS DURING CONSTRUCTION. ANY DAMAGE TO ADJOINING AND EXISTING STREETS MUST BE REPAIRED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THIS PROJECT.
32. NO FILL DIRT SHALL BE PLACED ON THE PROPERTY THAT MIGHT INTERFERE WITH DRAINAGE FLOW ON ADJACENT PROPERTY. STORM DRAINAGE SYSTEM SHALL BE INSTALLED PRIOR TO FILL MATERIAL BEING PLACED.
33. NEW STORM DRAINAGE CROSSING EXISTING SANITARY SEWER MAIN: STORM SEWER WILL BE INSTALLED AND BACKFILLED ACCORDING TO PLAN. THE CITY OF HUNTSVILLE WATER POLLUTION CONTROL DIVISION WILL RUN A TVI TEST ON THE EXISTING SANITARY SEWER TO CHECK FOR ANY MISALIGNMENT OR SETTLEMENT OF THE SANITARY SEWER LINE UNDER THE NEW STORM SEWER PIPE. IF SETTLEMENT, CAUSED BY THE NEW STORM SEWER IS DETECTED, THEN THE CONTRACTOR WILL BE REQUIRED TO MAKE THE NECESSARY REPAIRS TO THE SANITARY SEWER LINE.
34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORING CONSTRUCTION MATERIALS IN A LOCATION APPROVED BY THE CITY ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING DAMAGED YARDS AND OR PROPERTY DUE TO STORAGE OF MATERIAL WITHOUT ADDITIONAL COST TO OWNER.
35. NO CHANGES SHALL BE MADE TO THESE APPROVED PLANS WITHOUT THE CITY ENGINEER BEING NOTIFIED BEFORE CHANGES ARE MADE, AND ACQUIRING APPROVAL FROM THE CITY ENGINEER.
36. CONTRACTOR SHALL NOTIFY RESIDENTS BEFORE REMOVING DRIVEWAYS OR OPENING TRENCHES THAT WILL PREVENT RESIDENT FROM USING DRIVEWAY. CONTRACTOR SHALL COORDINATE HIS WORK AS MUCH AS PRACTICAL TO AVOID INTERFERENCES WITH ACCESS TO HOUSES.
37. CONTRACTOR SHALL ASSIST IN GARBAGE PICK-UP TO MAKE SURE CITY GARBAGE SERVICE IS PROVIDED. CONTRACTOR SHALL ASSIST IN MAIL SERVICES TO HOUSES.

BENCHMARK NO. 1:  
PK NAIL IN PARKING LOT  
OF MAYFAIR PARK  
ELEV. = 627.87

BENCHMARK NO. 2:  
RAILROAD SPIKE IN LIGHT  
POLE AT THE INTERSECTION  
OF VANCE ROAD & THORTON  
AVENUE  
ELEV. = 617.01

CONTROL POINT NO. 1  
PK NAIL IN MAYFAIR  
PARKING LOT  
N 1532274.50  
E 431869.31

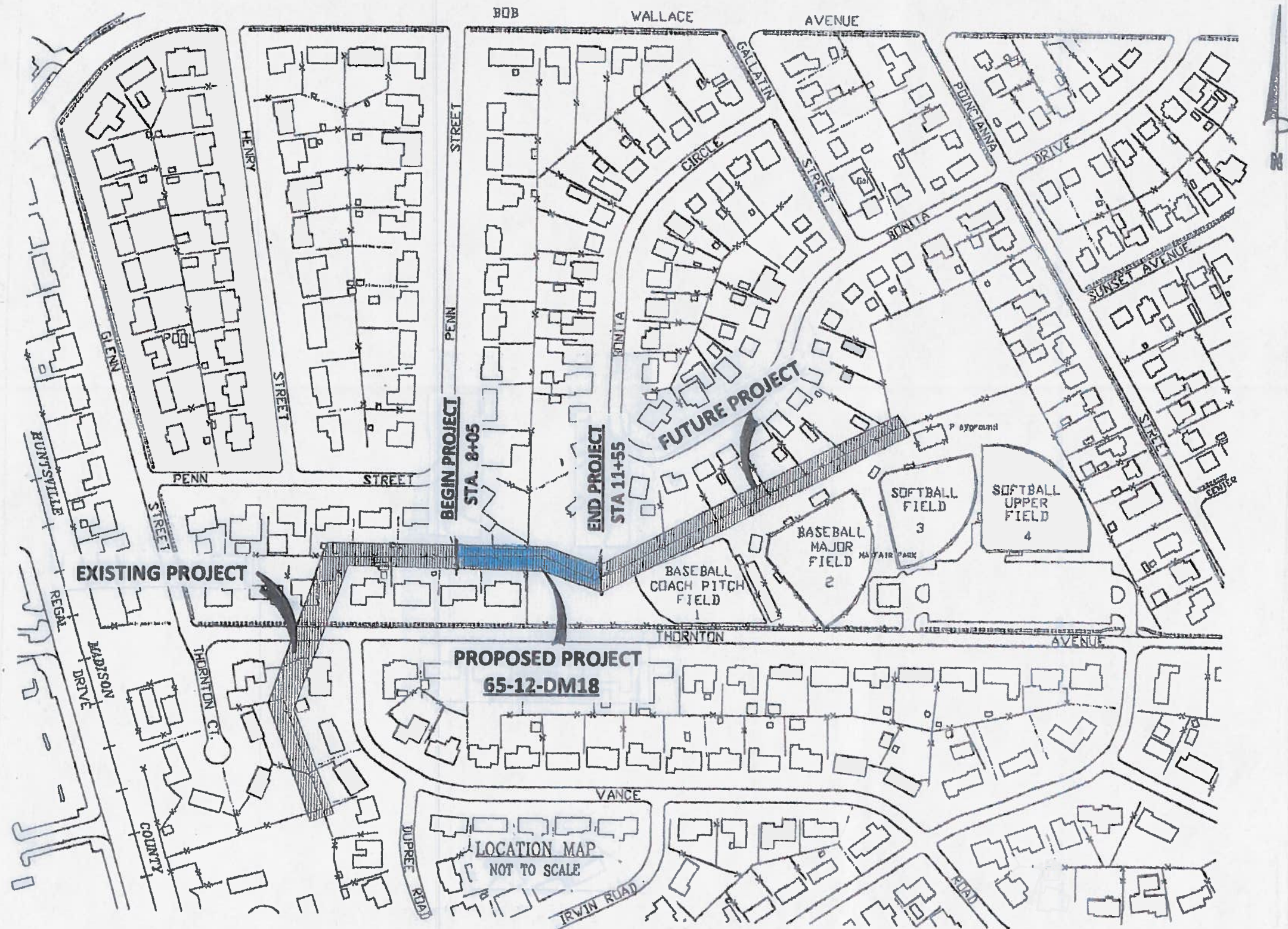
CONTROL POINT NO. 2  
PK NAIL IN MAYFAIR  
PARKING LOT  
N 1532273.48  
E 432025.41

**PROJECT NO. 65-12-DM18**

**SHEET 2 OF 6**





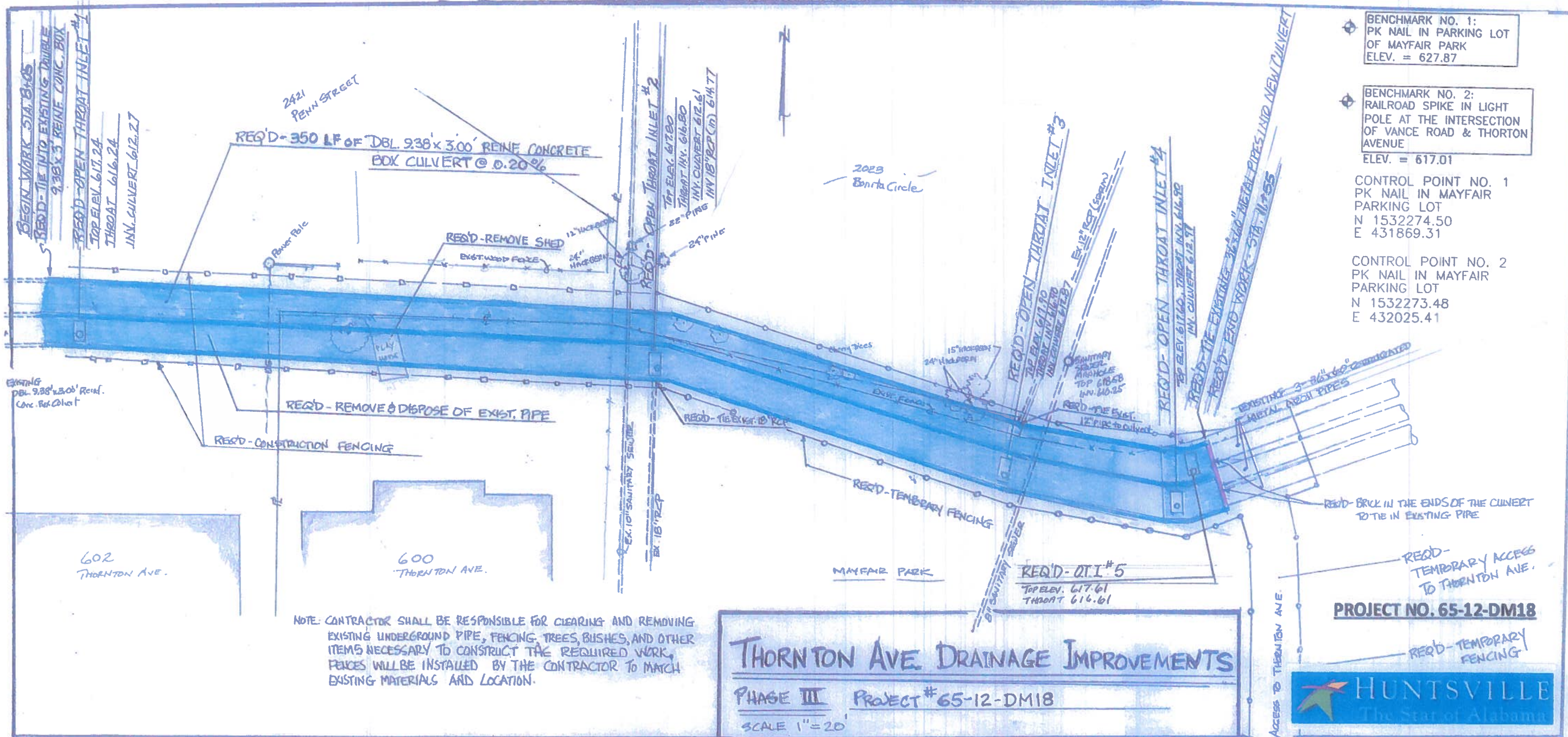


**PROJECT NO. 65-12-DM18**

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**SHEET 3 OF 6**





BENCHMARK NO. 1:  
PK NAIL IN PARKING LOT  
OF MAYFAIR PARK  
ELEV. = 627.87

BENCHMARK NO. 2:  
RAILROAD SPIKE IN LIGHT  
POLE AT THE INTERSECTION  
OF VANCE ROAD & THORNTON  
AVENUE  
ELEV. = 617.01

CONTROL POINT NO. 1  
PK NAIL IN MAYFAIR  
PARKING LOT  
N 1532274.50  
E 431869.31

CONTROL POINT NO. 2  
PK NAIL IN MAYFAIR  
PARKING LOT  
N 1532273.48  
E 432025.41

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND REMOVING EXISTING UNDERGROUND PIPE, FENCING, TREES, BUSHES, AND OTHER ITEMS NECESSARY TO CONSTRUCT THE REQUIRED WORK. FENCES WILL BE INSTALLED BY THE CONTRACTOR TO MATCH EXISTING MATERIALS AND LOCATION.

# THORNTON AVE DRAINAGE IMPROVEMENTS

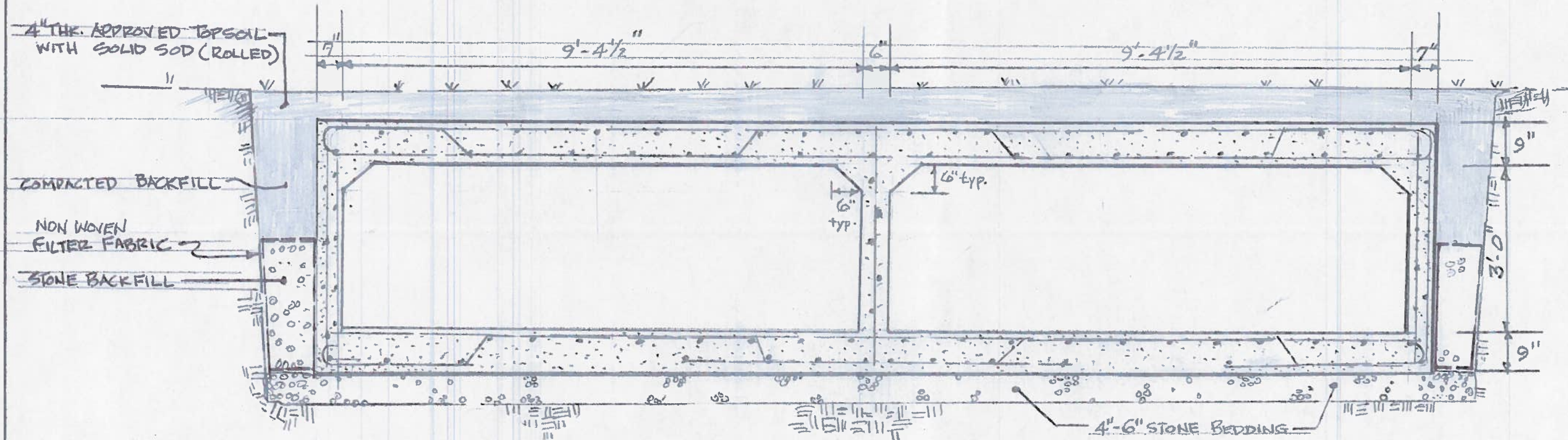
PHASE III PROJECT # 65-12-DM18

SCALE 1" = 20'

PROJECT NO. 65-12-DM18







## CULVERT DETAILS

Use State of Alabama Highway Department Standard Reinforced Concrete Box Culvert for Dbl. 10' x 4' Opening (Fill 3'-6')

The Contractor shall adjust the number and length of bars to fit the required Dbl. 9.38' x 3' opening culvert

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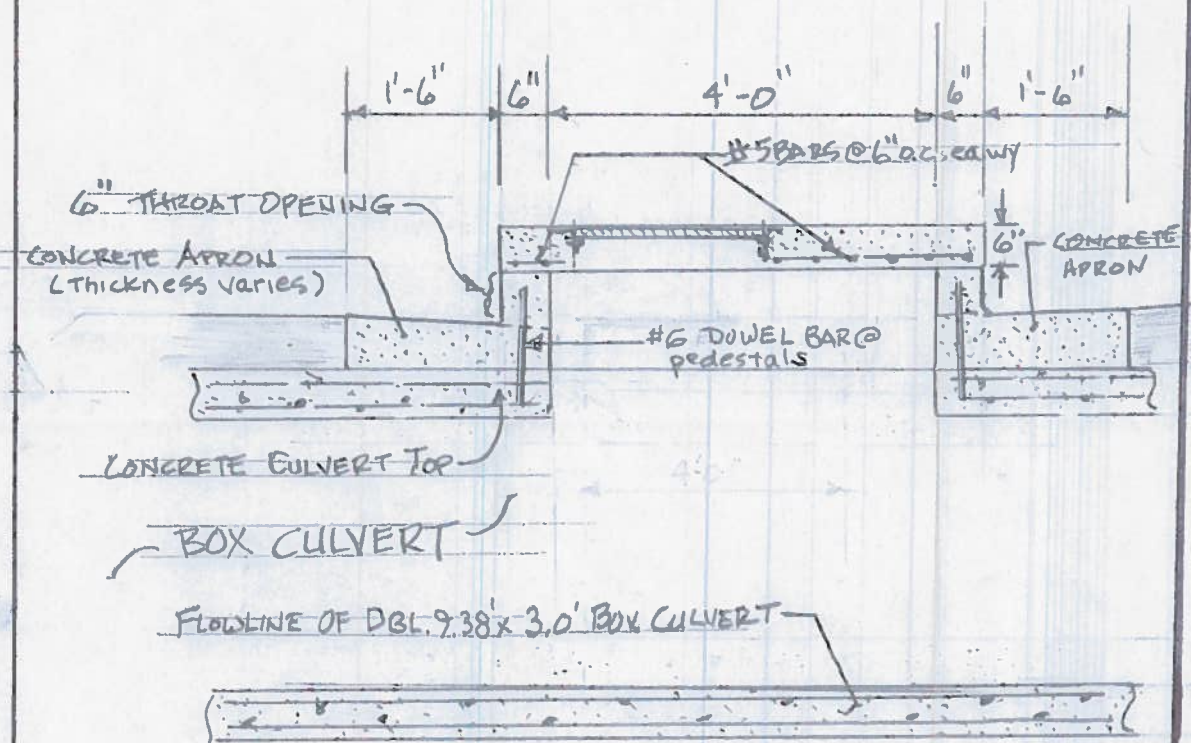
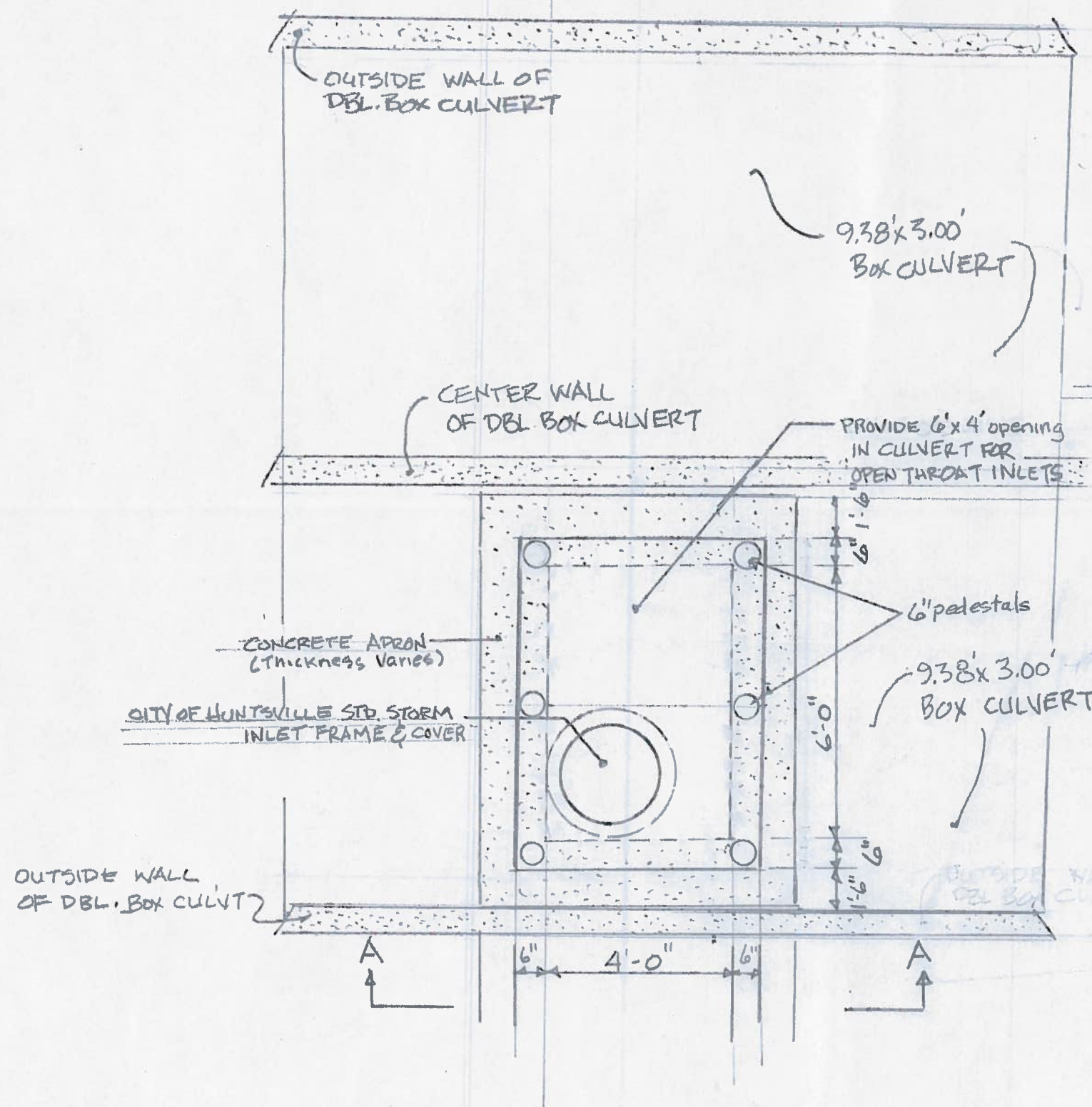
THORNTON AVE. DRAINAGE IMPROVEMENTS, PHASE III

PROJECT # 65-12-DM18

BOX CULVERT DETAIL DRAWING







## SECTION A-A



# OPEN THROAT INLET DETAILS

PROJECT NO. 65-12-DM18